

ABSTRACT

Executing programs coded in an instruction set of a first computer on a computer of a second, different architecture. An operating system maintains an association between each one of a set of concurrent threads and a set of computer resources of the thread's context. Without modifying a pre-existing operating system of the computer, an entry exception is establishing to be raised on each entry to the operating system at a specified entry point or on a specified condition. The entry exception has an associated entry handler programmed to save a context of an interrupted thread and modify the thread context before delivering the modified context to the operating system. A resumption exception is established to be raised on each resumption from the operating system complementary to one of the specified entries. The resumption exception has an associated exit handler programmed to restore the context saved by a corresponding execution of the entry handler. The entry exception, exit exception, entry handler, and exit handler are cooperatively designed to maintain an association between a one of the threads and an extended context of the thread through a context change induced by the operating system, the extended context including resources of the computer associated with the thread beyond those resources whose association with the thread is maintained by the operating system.

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